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ARMY ELECTRONICS RESEARCH AND DEVELOPMENT COMMAND WS--ETC F/G 4/2
17901A HONEST JOHN, MISSILE NUMBER 2054, ROUND NUMBER 663 ASL, --ETC(U)
SEP 79

UNCLASSIFIED ERADCOM/ASL-DR-1075

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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) Meteorological data gathered for the launching of 17901A HONEST JOHN, Missile Number 2054, Round Number 663 ASL are presented in tabular form.		

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EDITION OF NOV 65 IS OBSOLETE

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INTRODUCTION

17901A HONEST JOHN, Missile Number 2054, Round Number 663 ASL was launched from LC-33, White Sands Missile Range (WSMR), New Mexico, at 1551 MDT, 25 September 1979. The scheduled launch time was 1545 MDT.

DISCUSSION

Meteorological data were recorded and reduced by the White Sands Meteorological Team, Atmospheric Sciences Laboratory (ASL), White Sands Missile Range, New Mexico. The data were obtained by the following methods:

1. Observations

a. Surface

(1) Standard surface observations to include pressure, temperature ($^{\circ}\text{C}$), relative humidity, dew point ($^{\circ}\text{C}$), density (gm/m^3), wind direction and speed, and cloud cover were made at the LC-33 Met Site at T-0 minutes.

(2) Anemometer data were provided from existing pole-mounted and tower-mounted anemometers at LC-33. Monitor of wind speed and direction from one anemometer was also provided in the launch control room.

b. Upper Air

(1) Low level wind data were obtained from RAPTS T-9 pibal observation at:

SITE AND ALTITUDE

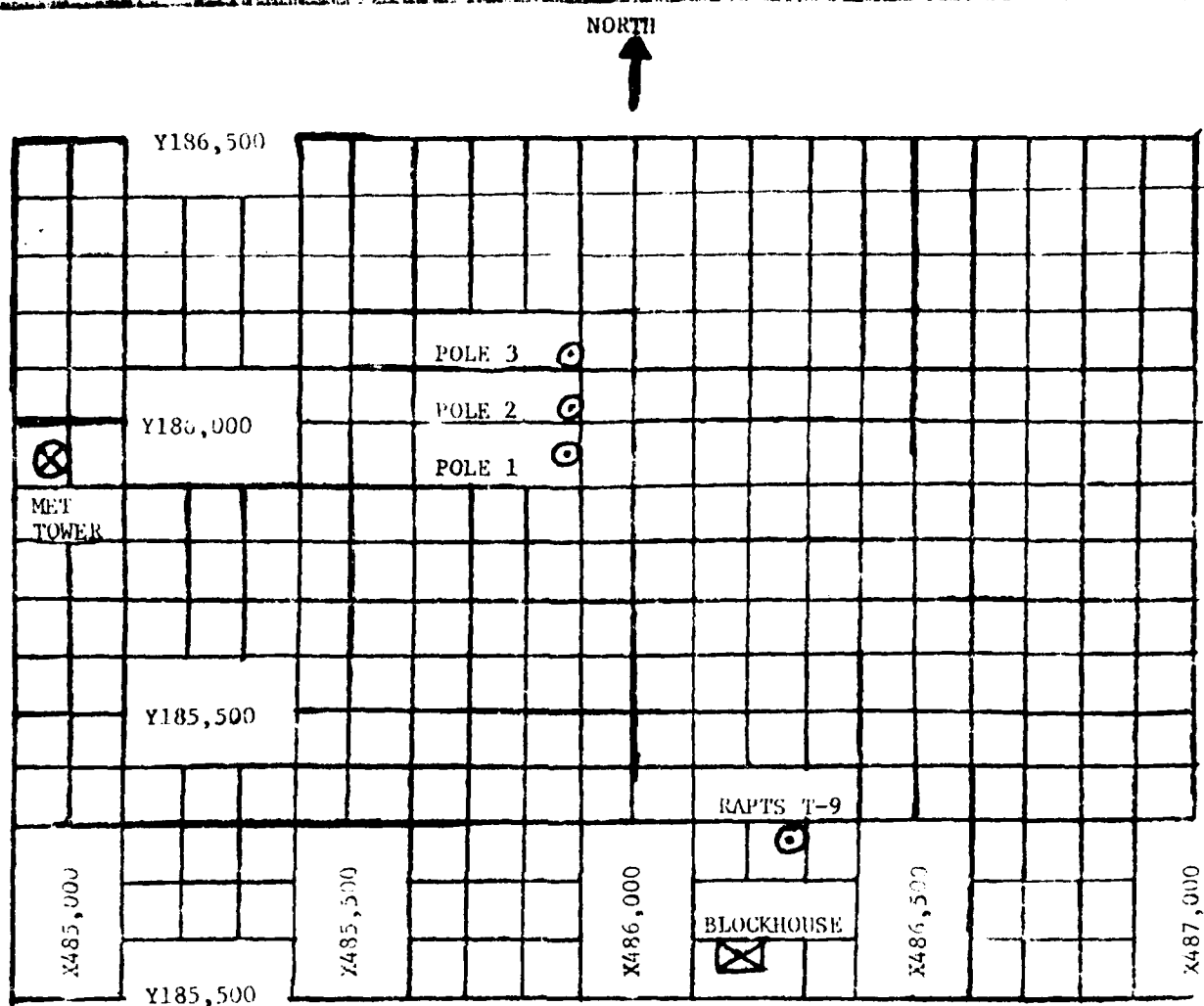
LC-33 3720 METERS

(2) Air structure data (rawinsonde) were collected at the following Met Sites. Data were collected from surface to 27,500 feet in 500-foot increments.

SITE AND TIME

WSD 1445 MST

Accession For	
NTIS Grant	<input checked="checked" type="checkbox"/>
DDC TAB	<input type="checkbox"/>
Unannounced	<input type="checkbox"/>
Justification	<input type="checkbox"/>
By _____	
Distribution/	
Availability Codes	
Dist	Available for
A	original
	33



1. MET TOWER - 4 Bendix Model T-20 Anemometers at 12 ft, 62 ft, 102 ft, and 202 ft with E/A recorders.
2. POLE ANEMOMETER - Bendix Model T-120 with E/A recorders.
 - (a) Pole #1 - 38.7 ft
 - (b) Pole #2 - 53.0 ft
 - (c) Pole #3 - 83.6 ft
3. RAPTS T-9 Radar Automatic Pilot-Balloon Tracking System T-9 Radar.

TABLE 1. Surface Observations taken at 1551 MDT,
25 September 1979, at LC-33,
17901A HONEST JOHN, Missile Number 2054,
Round Number 663 ASL.

ELEVATION	3977.30	FT/MSL
PRESSURE	884.7	MBS
TEMPERATURE	29.6	°C
RELATIVE HUMIDITY	18	%
DEW POINT	2.5	°C
DENSITY	1012	GM/M ³
WIND SPEED	Gusting 12	KTS
WIND DIRECTION	06/280	DEGREES
CLOUD COVER	0	Cu

LC-33 FIXED POLE ANEMOMETER MEASURED WINDS

POLE #1			POLE #2			POLE #3		
T-TIME SEC	DIR DEG	SPEED KTS	T-TIME SEC	DIR DEG	SPEED KTS	T-TIME SEC	DIR DEG	SPEED KTS
-30	141	13	-30	144	11	-30	145	13
-20	129	15	-20	125	13	-20	141	15
-10	132	15	-10	126	15	-10	140	13
0.0	126	13	0.0	123	14	0.0	132	10
+10	125	14	+10	113	15	+10	123	11

POLE #1 = X485,874.29 Y185,958.90 H4018.74 38.7 ft. AGL

POLE #2 = X485,874.93 Y186,012.00 H4033.57 53.0 ft AGL

POLE #3 = X485,877.29 Y186,116.06 H4063.92 83.6 ft AGL

TABLE 2

TYPE 17901A HONEST JOHN MISSILE NO. 2054 ROUND NO. 663 ASL

LAUNCHED FROM LC-33 DATE 25 September 1979 TIME 1551 MDT

NOTE: WIND DIRECTIONS ARE REFERENCED TO TRUE NORTH.

LC-33 METEOROLOGICAL TOWER ANEMOMETER MEASURED WINDS (202 FT TOWER)

LEVEL #1 12 Feet			LEVEL #2 62 Feet		
T-TIME SEC	DIR DEG	SPEED KTS	T-TIME SEC	DIR DEG	SPEED KTS
-30	150	09	-30	140	14
-20	150	10	-20	135	13
-10	159	09	-10	132	13
0.0	147	07	0.0	141	09
+10	141	10	+10	144	12
LEVEL #3 102 Feet			LEVEL #4 202 Feet		
T-TIME SEC	DIR DEG	SPEED KTS	T-TIME SEC	DIR DEG	SPEED KTS
-30	125	14	-30	114	15
-20	143	14	-20	121	15
-10	128	15	-10	123	16
0.0	135	11	0.0	141	15
+10	148	12	+10	128	14

WTSM COORDINATES: X484,982.64 Y185,057.73 H3983.00 (base)

TABLE 3

TYPE 17901A HONEST JOHN MISSILE NO. 2054 ROUND NO. 663 ASL

LAUNCHED FROM LC-33 DATE 25 September 1979 TIME 1551 MDT

NOTE: WIND DIRECTIONS ARE REFERENCED TO TRUE NORTH.

GSRS PILOT BALLOON MEASURED WIND DATA

TABLE 4

RELEASED FROM LC33 DATE 25 September 1979 TIME 1551 MDT
 RELEASE POINT COORDINATES (WSTM) X= 486,037.24 Y= 182,350.15 H 3977.30
 MISSILE TYPE 17901A HONEST JOHN MISSILE NO. 2054 ROUND NO 663 ASL
 MISSILE LAUNCHED FROM LC-33 DATE 25 September 1979 TIME 1551 MDT

NOTE: WIND DIRECTIONS ARE REFERENCED TO TRUE NORTH.

HEIGHT - METERS AGL

HEIGHT AGL	DIRECTION DEGREES	SPEED KTS	HEIGHT AGL	DIRECTION DEGREES	SPEED KTS	HEIGHT AGL	DIRECTION DEGREES	SPEED KTS
SFC	280	05	600	144	21	1200	146	20
30	240	05	630	143	21	1230	149	20
60	199	05	660	141	19	1260	151	19
90	158	05	690	139	19	1290	154	19
120	117	04	720	137	18	1320	156	18
150	120	08	750	112	19	1350	157	18
180	123	12	780	087	19	1380	157	18
210	126	15	810	062	20	1410	157	19
240	128	19	840	037	20	1440	157	20
270	128	19	870	063	21	1470	160	19
300	127	19	900	089	21	1500	162	19
330	127	19	930	115	22	1530	164	18
360	126	19	960	140	22	1560	166	18
390	130	19	990	140	22	1590	165	18
420	134	19	1020	140	22	1620	163	19
450	138	19	1050	140	22	1650	161	20
480	141	18	1080	139	22	1680	159	21
510	142	19	1110	141	22	1710	158	21
540	143	20	1140	143	21	1740	157	20
570	144	20	1170	145	21	1770	156	20

[illegible]

STATION ALTITUDE 3989.00 FEET MSL
25 SEP. 79 1445 HRS MST
ASCENSION NO. 386

SIGNIFICANT LEVEL DATA
2080020360
WHITE SANDS

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

TABLE 5

PRESSURE GEOMETRIC ALTITUDE MILLIBARS MSL FEET	TEMPERATURE		REL. HUM. PERCENT
	AIR DEGREES	DEWPOINT CENTIGRADE	
885.0	30.4	-4.6	10.0
850.0	26.6	-3.1	14.0
728.6	13.6	-11.0	17.0
700.0	9.9	-12.6	19.0
638.2	3.4	-16.3	22.0
594.8	.5	-23.1	15.0
577.8	.5	-24.7	13.0
520.4	-5.6	-28.8	14.0
500.0	-6.6	-30.4	13.0
444.0	-12.9	-35.3	13.0
436.6	-13.5	-35.9	13.0
400.0	-18.8	-40.2	13.0
360.8	-25.3	-44.2	15.0

UPPER AIR DATA
25800/0300
WHITE SANDS

STATION ALTITUDE 3989.00 FEET MSL
25 SEP. 79 1445 HRS MST
ASCENSION NO. 366

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

TABLE 6

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND M/S	DIRECTION DEGREES (TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
3989.0	865.0	30.4	-4.6	10.0	1013.8	679.4	120.0	9.9	1.000244
4000.0	864.7	30.4	-4.6	10.0	1013.5	679.3	120.1	9.9	1.000244
4500.0	859.6	28.7	-3.7	11.7	1001.4	677.6	125.0	8.7	1.000242
5000.0	854.8	27.1	-3.2	13.4	989.5	675.8	135.2	7.6	1.000241
5500.0	839.9	25.6	-3.6	14.2	977.4	674.1	142.8	6.7	1.000238
6000.0	825.2	24.1	-4.5	14.6	965.1	672.3	142.9	6.6	1.000234
6500.0	810.7	22.6	-5.4	14.9	953.1	670.6	135.9	6.9	1.000230
7000.0	796.5	21.1	-6.3	15.3	941.2	668.9	134.3	7.3	1.000226
7500.0	782.5	19.6	-7.2	15.6	929.5	667.2	133.4	7.8	1.000223
8000.0	768.8	18.1	-8.1	16.0	916.0	665.4	131.3	8.7	1.000219
8500.0	755.3	16.6	-9.0	16.3	903.6	663.7	127.3	9.9	1.000216
9000.0	742.1	15.1	-10.0	16.6	895.4	662.0	120.1	12.2	1.000213
9500.0	729.1	13.7	-10.9	17.0	884.3	660.2	115.1	14.3	1.000209
10000.0	715.9	12.0	-11.7	17.9	873.6	658.3	109.5	14.2	1.000206
10500.0	703.0	10.3	-12.4	18.8	862.9	656.3	103.9	14.3	1.000203
11000.0	690.1	8.9	-13.1	19.5	851.4	654.7	99.3	23.7	1.000200
11500.0	677.5	7.6	-13.9	20.1	839.6	653.1	97.4	34.1	1.000197
12000.0	665.0	6.3	-14.6	20.7	828.1	651.6	98.2	38.0	1.000194
12500.0	652.8	5.0	-15.3	21.3	816.7	650.1	99.7	39.2	1.000191
13000.0	640.8	3.7	-16.1	21.9	805.5	648.5	151.1	39.1	1.000188
13500.0	628.9	2.8	-17.6	20.5	793.2	647.4	164.8	49.0	1.000184
14000.0	617.1	2.0	-19.3	18.7	780.7	646.5	172.2	55.6	1.000180
14500.0	605.6	1.2	-21.2	16.8	768.3	645.6	180.0	48.9	1.000177
15000.0	594.3	.5	-23.1	14.9	756.1	644.6	190.9	37.0	1.000173
15500.0	583.1	.5	-24.1	13.6	741.9	644.6	196.9	13.6	1.000170
16000.0	572.1	-.1	-25.1	13.1	729.4	643.9	296.2	6.4	1.000167
16500.0	561.2	-1.2	-25.8	13.3	718.6	642.6	199.0	4.9	1.000164
17000.0	550.6	-2.3	-26.5	13.5	707.8	641.3	173.1	10.6	1.000161
17500.0	540.1	-3.4	-27.3	13.6	697.3	639.9	180.3	11.5	1.000159
18000.0	529.8	-4.6	-28.1	13.8	686.9	638.6	186.3	12.5	1.000156
18500.0	519.8	-5.6	-28.8	14.0	675.6	637.3	192.1	11.0	1.000154
19000.0	509.8	-6.1	-29.6	13.5	664.8	636.7	199.7	9.5	1.000151
19500.0	500.0	-6.6	-30.4	13.0	653.2	636.1	211.8	6.9	1.000148
20000.0	490.2	-7.6	-31.2	13.0	643.0	634.9	239.2	4.6	1.000146
20500.0	480.6	-8.7	-32.1	13.0	632.9	633.6	277.3	4.3	1.000143
21000.0	471.3	-9.7	-32.9	13.0	623.1	632.4	299.8	5.4	1.000141
21500.0	462.1	-10.8	-33.7	13.0	613.4	631.1	305.6	7.0	1.000139
22000.0	453.1	-11.8	-34.6	13.0	603.8	629.9	290.8	8.7	1.000136
22500.0	444.2	-12.9	-35.4	13.0	594.4	628.6	281.5	10.9	1.000134
23000.0	435.4	-13.7	-36.1	13.0	584.4	627.6	277.4	12.0	1.000132

UPPLR AIR DATA
2680020300
WHITE SANDS

STATION ALTITUDE 3989.00 FEET MSL
25 SEP. 79
ASCENSION NO. 386

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

TABLE 6 (CONT)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
		AIR DEGREES	DEWPOINT CENTIGRADE				DIRECTION DEGREES (T.N.)	SPEED KNOTS	
23500.0	426.7	-14.9	-37.1	13.0	575.5	620.1	274.0	13.2	1.000130
24000.0	418.2	-16.1	-38.0	13.0	566.7	624.7	275.8	13.8	1.000128
24500.0	409.9	-17.3	-39.0	13.0	558.0	629.2	278.5	14.3	1.000125
25000.0	401.7	-18.5	-40.0	13.0	549.5	621.7	280.2	15.3	1.000123
25500.0	393.5	-19.8	-40.9	13.3	541.1	620.1	280.4	16.9	1.000122
26000.0	385.4	-21.1	-41.6	13.7	532.7	618.5	280.5	18.6	1.000120
26500.0	377.6	-22.4	-42.4	14.1	524.6	615.9			1.000118
27000.0	369.9	-23.7	-43.3	14.5	516.5	615.3			1.000116
27500.0	362.3	-25.0	-44.1	14.9	508.6	613.7			1.000114

STATION ALTITUDE 3789.00 FEET MSL
25 SEP. 79 1445 HRS MST
ASCENSION NO. 386

MANDATORY LEVELS
2080020300
WHITE SANDS

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

TABLE 7

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM.		WIND DATA	
MILLIBARS	FEET	AIR DEGREES	DEWPOINT CENTIGRADE	PERCENT	DIRECTION DEGREES(TN)	SPEED KNOTS	
850.0	5158.	26.6	-3.1	14.	136.0	7.3	
800.0	6893.	21.5	-6.0	15.	134.5	7.2	
750.0	8707.	16.0	-9.4	16.	123.9	10.9	
700.0	10607.	9.9	-12.0	19.	102.5	15.7	
650.0	12006.	4.7	-15.5	21.	100.0	39.5	
600.0	14729.	.9	-22.2	10.	176.5	40.0	
550.0	17012.	-2.4	-26.0	13.	173.5	10.6	
500.0	19470.	-6.6	-30.4	13.	211.4	7.0	
450.0	22141.	-12.2	-34.9	13.	257.2	9.4	
400.0	25060.	-18.8	-40.2	13.	280.2	15.6	